

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS

MAY 2010

DECORATIVE (RESIDENTIAL) LAMP POST
FOR USE ON STREETS CLASSIFIED PRIMARY OR LOWER

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of residential, decorative, cast, streetlight poles. These decorative streetlight poles are intended for use along roadways in Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and the attached drawings.

Each pole shall include the following:

- a) Access plate with attachment hardware;
- b) Anchor Bolts, nuts, and washers (as specified);
- c) Typical footer design specifications including but not limited to, base template, anchor dimensions, reinforcement and footer details;
- d) One (1) pint of touch-up paint, Federal Green, federal color # 595B, # 14036.

2) DESIGN CRITERIA

2.1 AASHTO Standards

The residential, decorative, cast, streetlight post shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO) Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

2.2 Wind Load

The residential, decorative, cast, streetlight post shall be deigned to resist (at yield strength of the material without permanent deflection or destruction), test loads equivalent to the calculated wind loads developed by the velocity pressures of a 80 MPH wind with a 30% gust factor. A minimum safety factor of 1.82 on the yield strength shall be maintained.

2.3 Effective Projected Area (EPA)

The residential, decorative, cast, streetlight post shall have a EPA allowable for

the following assumptions:

- a) Streetlight luminaire shall be assumed to be rectangular in shape with triangular shapes at the top and bottom, minimum length plus width of sixty-five (65) inches, when viewed from the side.
- b) The streetlight luminaire shall have a nominal mounting height of 12 feet above the base.
- c) One or two (24" x 36") maximum traffic signs may be mounted with the sign's bottom edge 7 feet above the base.

3) MATERIALS

3.1 Iron Casting

The lamp post shall be integrally cast as one piece and shall be cast iron per ASTM A-48--72, Class 30. The sections are to be indicated below. The castings are to be true to pattern, with 16 flutes separated by 16 flat facets. There shall be no visible signs of separation between the cope and drag sections of the mold. All ornamental components shall be cast iron.

3.2 Aluminum Casting

The lamp post may be cast in one piece, as described above, of aluminum alloy of the same details as described above and minimum wall thickness as described below. The alloy used in the casting shall have a minimum yield strength of 30,000 PSI and shall be heat treated as required to provide that yield strength.

3.3 Split Casting

The lamp post may be a multiple piece castings that are factory-assembled into one piece may be considered, provided that there are no gaps between any pieces of the assembly that would allow water seepage or rust. Prior written approval required for the method.

4) PEDESTAL

The pedestal shall be 17 inches +/- 0.25 inch in diameter with a height of 17 1/4 inches +/- 1.0 inch.

5) BOLT CIRCLE

The nominal bolt circle of the lamp post shall be 12 inch in diameter and consist of four (4) equally spaced slots to accommodate 3/4 inch diameter anchor bolts

6) SHAFT

The shaft shall taper uniformly from six (6) inches outside diameter at the bottom to a minimum of four (4) inches outside diameter at the top. The shaft section shall consist of sixteen (16) equally spaced flutes. The outer portion of each flute shall have a flat face, 3/8 +/- 1/16 inches in width. The flutes shall remain constant from the top to the bottom of the tapered shaft

7) HEIGHT

The height of the post, less tenon, shall be 12 feet 0 inches. The weight of the cast iron post with complete door assembly, shall be 460 lbs. +/- 5%. All castings shall be painted with a shop coat of iron oxide primer.

8) TENON

The top of the post shall be equipped with a luminaire mounting tenon integrally cast as a part of the post casting. The tenon shall measure 3.25 +/- 0.25 inches outside diameter and be 2.5 inches long.

9) GROUNDING LUG

The post shall be drilled and tapped for a 1/4 inch - # 20 grounding screw, inside the lamp post and opposite the access door,

10) HANDHOLE

The post shall have an handhole/access door with minimum opening 6 +/- 0.5 inches high and shall be a minimum of 3 1/2 +/- 1.0 inch wide at the top and 7.5 inches +/- 1.0 inches wide at the bottom secured with stainless steel machine screw shall be provided in the base of the lamp post. The handhole is at 90 degrees clockwise with respect to the luminaire arm when viewed from above the pole.

11) BOTTOM ACCESS HOLE

The pedestal shall have a clear opening at grade a minimum of nine (9) inches in

diameter. The base of the lamp post shall have an inside diameter sufficient to accommodate two four inch diameter schedule 40 PVC conduits at the bottom of the post, side by side, for streetlight wiring in accordance with utility company requirements.

12) TOLERANCES

Dimensions may be subject to a tolerance of plus or minus 10%, provided that the appearance and proportions are reasonably identical to the post shown on the attached drawing, in the sole judgement of the County. The 10% tolerance shall not apply to the height of the post nor to the diameter of the tenon, for which no tolerance will be allowed other than normal manufacturing tolerances.

13) ANCHOR BOLTS

Each post shall be furnished with four (4) anchor bolts, each 3/4 inches diameter x 24 inch long, plus a 3" "L" at the bottom. Each bolt shall be supplied with one (1) nut and one (1) washer. Bolts, nuts, and washers shall be fully hot dipped galvanized in accordance with ASTM A153.

14) FINISH

15.1 Cast Aluminum

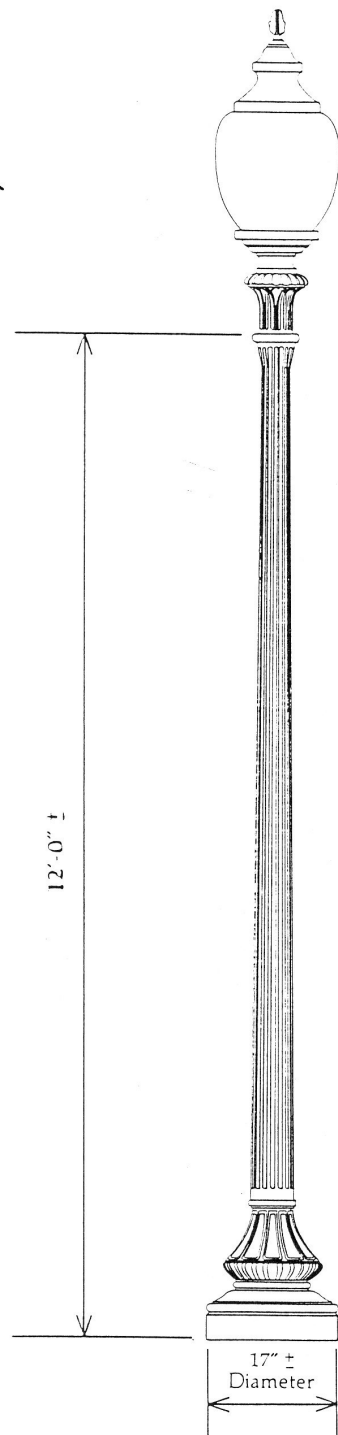
The cast aluminum poles, access doors, and hardware shall be finished with a dark green electrostatically-applied thermoset polyester powder coat, color "Federal Green" or approved equal, as per the attached finish specification "ICS-2". One pint can of Federal Green touch-up enamel or approved equal, shall be supplied.

15.2 Cast Iron

The cast iron poles and all components shall be supplied with one coat of oil-based red lead primer paint. Two (2) coats of enamel "Federal Green", federal color 595B, # 14036 shall be applied to each pole in the field.

16) POLE INFORMATION

The lamp post shall be either the Antique Capitol Series, C12/17-CI/PP, the Washington #12 Standard modified to 12 foot 0 inches in height, less tenon, or approved equal.



LIGHT POLE BASE
FOOTING DETAIL FOR 17" BASE

